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IN THE

# Supreme Court of the United States

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| STATE OF WISCONSIN, STATE OF MINNESOTA, STATE OF OHIO, and STATE OF PENNSYLVANIA,<br>*Complainants,*<br>*vs.*<br>STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO,<br>*Defendants.*<br>STATE OF MISSOURI, STATE OF KENTUCKY, STATE OF TENNESSEE, STATE OF LOUISIANA, STATE OF MISSISSIPPI, and STATE OF ARKANSAS,<br>*Intervening Defendants.* | No. 5, Original. |
| STATE OF MICHIGAN,<br>*Complainant,*<br>*vs.*<br>STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al.,<br>*Defendants.* | No. 8, Original. |
| STATE OF NEW YORK,<br>*Complainant,*<br>*vs.*<br>STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, et al.,<br>*Defendants.* | No. 9, Original. |

## [S]IXTY-ANNUAL REPORT OF THE SANITARY DIS[T]RICT OF CHICAGO OF JANUARY 1, 1934, MADE PURSUANT TO DECREE OF APRIL 21, 1930.

FRED KLEIN CO., [1]924 PRINTERS, CHICAGO.

IN THE

# Supreme Court of the United States

NOS. 5, 8 AND 9, ORIGINAL.

OCTOBER TERM, 1933.

| | |
|---|---|
| STATE OF WISCONSIN, STATE OF MINNESOTA, STATE OF OHIO, and STATE OF PENNSYLVANIA, *Complainants,* vs. STATE OF ILLINOIS and THE SANITARY DISTRICT OF CHICAGO, *Defendants.* STATE OF MISSOURI, STATE OF KENTUCKY, STATE OF TENNESSEE, STATE OF LOUISIANA, STATE OF MISSISSIPPI, and STATE OF ARKANSAS, *Intervening Defendants.* | No. 5, Original. |
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## SEMI-ANNUAL REPORT OF THE SANITARY DISTRICT OF CHICAGO OF JANUARY 1, 1934, MADE PURSUANT TO DECREE OF APRIL 21, 1930.

Pursuant to provisions of paragraph numbered 5 of the Decree in the above entitled causes, entered on April 21, 1930, the Defendant, The Sanitary District of Chicago, hereby makes its semi-annual report of January 1, 1934, as follows:

## CONSTRUCTION PROGRAM.

In the semi-annual report of July 1, 1933, the status of completed work in the sewage treatment construction program involved in this case was stated to be on June 1, 1933, as follows:

TABLE 1.

COMPLETED WORK AS OF JUNE 1, 1933.

| | |
|---|---|
| Calumet Project | $ 21,080,352.22 |
| North Side Project | 37,102,366.63 |
| West Side Project | 41,711,735.76 |
| Southwest Side Project | 292,508.46 |
| Miscellaneous Plants and Sewers | 596,188.86 |
| Chicago River Controlling Works | 53,415.74 |
| Total | $100,786,567.67 |

TABLE 2.

FUTURE WORK AFTER JUNE 1, 1933.

| | |
|---|---|
| Calumet Project | $ 14,140,000.00 |
| North Side Project | 5,392,500.00 |
| West Side Project | 13,138,000.00 |
| West-Southwest Plant | 37,650,000.00 |
| Southwest Side Project | 44,847,000.00 |
| Miscellaneous Plants and Sewers | 2,000,000.00 |
| Chicago River Controlling Works (if necessary) | 3,200,000.00 |
| Total | $120,367,500.00 |

During the interim of six months between the date of the last report and the present report, very little actual construction work has been accomplished. Work has been prosecuted diligently on the design of the Calumet, the West Side and the Southwest Side Projects and on the West-Southwest Sewage Treatment Plant.

*Calumet Project.* Construction work on the Calumet Pumping Station and Blower House and on the Aeration Tanks, Operating Galleries and Final Settling Tanks has been discontinued since December, 1931, because of the inability of the Sanitary District to pay the Contractors, as indicated in previous reports to the Court. The manufacturing of pumps, pump motors and large valves has been completed

and this machinery is in storage. The fabrication of blowers and blower motors is about 40 per cent completed. None of this machinery work has been paid for. Plans are practically completed for the Harvey sewer, the California Avenue outlet sewer, the Evergreen Park sewer and for the sewer in South Park Avenue and plans are being prepared for the Blue Island Sewer Extension. These sewers are estimated to cost about $3,850,000.

Plans have been completed for preliminary settling tanks, sludge concentration tanks, screens, meter vault, sewage conduits, etc., for the Calumet Treatment Works. This work is ready for advertising for bids. Plans are also in preparation for the sludge dewatering and incinerating plant for the Calumet Works. It is contemplated that this contract will be let in the late summer of 1934. Preliminary plans have been made for the conduit connecting the old Calumet Pumping Station with the new. Final plans for this structure will be made by 1934. These three contracts with the work now under contract will complete the Calumet Works, except for roads, grading, lighting, etc.

Agreements were made on December 16, 1933 for the purchase of bonds of the Sanitary District of Chicago by the Federal Emergency Administration of Public Works to finance the completion of the contracts for the Pumping Station and Blower House, the Aeration and Final Settling Tanks, etc., and to finance the completion of the Calumet Sewage Treatment Works, the construction of the Harvey Sewer, South Park Avenue Sewer, Blue Island Sewer Extension and California Avenue Outlet Sewer. It is

expected that construction work can be resumed immediately and all of these items completed before the end of 1935. This work will complete the Calumet Project, except for five sewers, namely, California Avenue Extension, Evergreen Park, Calumet City, Colfax Avenue and Blue Island Intercepting Sewer, estimated to cost $4,590,000.

*West Side Project.* Construction work on the third battery of Imhoff tanks and on Contract Sections 3 and 4, of the West Side Sewer, has also been discontinued since December, 1931, because of lack of funds. Plans have been completed for Contract Sections 5, 6, 7, 8 and 10 of the West Side Sewer, and plans are being prepared for Sections 9 and 1A of this Sewer, so that contracts for these can be let early in 1934. Sections 5, 6, 7, 8 and 10 are estimated to cost about $5,240,000 and Sections 9 and 1A about $1,270,000.

Agreements were made on December 16, 1933 for the purchase of bonds of the Sanitary District of Chicago by the Federal Emergency Administration of Public Works to finance the completion of the third battery of Imhoff Tanks and Sections 3 and 4 of the West Side Sewer and the construction of Contract Sections 5, 6, 7, 8, 9, 10 and 1A of the West Side Sewer. It is expected that construction work can be resumed immediately and all of these items completed before the end of 1935. This work will complete the West Side Project except for the Cicero Avenue Outfall Sewer, Section 4A of the West Side Sewer and additional sewers for 100 per cent collection, estimated to cost $1,870,000.

The operation of the sludge filtering and drying unit at the West Side Works since August, 1932, has

demonstrated the feasibility of dewatering and incineration for the disposal of sludge. A contract was let on September 14, 1933, in the amount of approximately $150,000, for an addition to this unit, which will be used to further develop the process. This contract is being financed through the sale of tax anticipation warrants. The construction of this additional unit is about 80 per cent completed. It should be in operation by February 1, 1934.

The activated sludge portion of the West Side Works for the complete treatment of sewage has been combined with the Southwest Side Sewage Treatment Plant, as stated in the last report to the Court. This will be discussed under the heading of "West-Southwest Treatment Plant".

*Southwest Side Project.* Work has been continued on the plans for the new Southwest Side sewage pumping station. Specifications are practically completed for the sewage pumping units. Bids can be taken for these units as soon as finances are provided. Since the Southwest Side sewage treatment works are to be built in combination with the works for the final treatment of the West Side sewage it would be extremely difficult from an accounting standpoint to segregate the costs applicable to the preliminary treatment of the Southwest Side sewage. The Southwest Side treatment works therefore will hereafter be considered as a part of the West-Southwest Sewage Treatment Plant. The Southwest Side project will cover the intercepting sewers, etc., for the collection of sewage which will flow to the new Southwest Side sewage pumping station of this new plant. This will include the Southwest Side Intercepting Sewers,

the South Side Sewers and Racine Avenue Pumping Station, the Upper Des Plaines Sewer and the West Towns Sewer. Later the Salt Creek Sewer, now draining into the West Side Treatment Works will be diverted to the Southwest Side pumping station and then be transferred to the Southwest Side Project.

The study of the Southwest Side intercepting sewer has been considered at length, particularly with reference to the crossing of this sewer under the Main Drainage Canal at the site of the treatment plant, and the possible use of the lower end of this sewer as the by-pass connection between the present West Side and the new Southwest Side sewage pumping stations.

*West-Southwest Treatment Plant.* Plans are being prepared for the blower house, the aeration tanks, operating galleries, final settling tanks, conduits, etc., for the new West-Southwest activated sludge plant. Specifications are practically ready for the blower units. Plans for the sewage pumping station and equipment have been discussed under the Southwest Side Project. Plans for the first two batteries of aeration and final settling tanks, etc., with sufficient capacity to handle 500 million gallons per day average flow of sewage are being prepared so that bids could be taken in the early spring of 1934 if it were not for the Engineering Survey required by the agreement with the Federal Emergency Administration of Public Works hereinafter described. Plans and specifications for the substructure of the blower house are being prepared so that bids could also be taken in the early summer of 1934.

An agreement was made on December 16, 1933 for the purchase of bonds of the Sanitary District of Chicago by the Federal Emergency Administration of Public Works, in the amount of $21,646,000, sufficient to construct about half of the West-Southwest Sewage Treatment Plant. One condition of the Agreement with the Federal Emergency Administration of Public Works is that the Sanitary District shall

> PART TWO, 5 (h). "Provide for and undertake an engineering survey at the expense of the Borrower by a Commission to be appointed by the Government to review the plans and specifications for the construction of Items 4 (A) to 4 (K), both inclusive, (these items all being on the West-Southwest Treatment Plant and estimated to cost $21,646,000) of Sub-Application, Docket No. 3622, as to the general method and details of sewage treatment. Such Commission is to make such survey as may be necessary to permit the District to take advantage of any change in the development of the art of sewage disposal;"

Another provision of this agreement is

> PART THREE, 4. *"Engineering Survey.* Before any contracts are let for work, labor and materials in connection with the construction of Item 4 (A) to Item 4 (K), both inclusive of Sub-Application, Docket No. 3622, or any proceeds of the sale of the Bonds are disbursed in connection therewith, the Borrower shall provide for the engineering survey provided in subparagraph 5 (h) PART TWO, hereof. Unless such survey be not completed within five months from the date hereof, all contracts and disbursements of funds in connection with the construction of such Items shall be made in accordance with the conclusions and recommendations of the Commission undertaking such survey, if approved by the Government or such Items shall be modified

or changed as recommended by the Commission, if approved by the Government, and in such event all contracts and disbursements shall be made in accordance with such modifications or changes. The salaries, fees and expenses of the Commission shall be charged against the Borrower as a part of the cost of constructing the works of the Projects of which such Items are a part, and paid from the Construction Fund of such Projects, or shall be paid from such other fund or funds as the Borrower may designate; provided, however, that such salaries, fees and expenses shall not be deemed to be labor and materials within the meaning of any Grant hereunder."

This is an "occurrence beyond the control of the Sanitary District" and will occasion some delay in commencing of actual construction work on the West-Southwest Sewage Treatment Plant.

*Activated Sludge Patent Suit.* The suit of Edgar C. Guthard, Activated Sludge, Ltd. and Activated Sludge, Inc., versus The Sanitary District of Chicago, in the United States District Court, for the Northern District of Illinois Eastern Division (In Equity No. 4280) mentioned in the last report to the Court is set for argument on January 30, 1934 before Judge Walter C. Lindley.

The suit brought against Milwaukee, which was decided for the plaintiffs, Activated Sludge, Inc., by Judge Geiger (Activated Sludge, Inc. versus the City of Milwaukee, In Equity No. 2323, Eastern District of Wisconsin) was appealed. The case was argued in the U. S. Circuit Court of Appeals for the 7th Circuit (The City of Milwaukee, Defendant Appellant, versus Activated Sludge, Inc., Plaintiff Appellee, U. S.

Circuit Court of Appeals, 7th Circuit, No. 5001) on December 5, 1933.

While the suit against the Sanitary District has no direct bearing at present on the progress of the sewage treatment construction program, it is mentioned herein so that the court may be advised of another element which tends to obstruct progress and may (if the patents are upheld) increase the cost of the works.

*Financial.* The financial condition of The Sanitary District of Chicago has been thoroughly discussed in previous semi-annual reports to the Supreme Court and in the report of Special Master McClennen of March 13, 1933. No further comments as to the reason for this financial crisis are deemed necessary at this time.

The local tax situation is practically the same as at the time of the last report to the Court. The amounts of taxes levied by the Sanitary District for the years 1928, 1929, 1930 and 1931, and the amounts received by the Sanitary District from the County Collector up to December 18, 1933, pursuant to these levies, are as follows:

| Year | Total Amount of Levy | Amount Collected | Amount Unpaid | Percentage Unpaid |
|---|---|---|---|---|
| 1928..... | $20,700,455.00 | $16,939,549.43 | $ 3,760,905.57 | 18.2% |
| 1929..... | 24,518,343.75 | 19,052,451.34 | 5,465,892.41 | 22.3% |
| 1930..... | 21,725,603.75 | 15,147,265.35 | 6,578,338.40 | 30.4% |
| 1931..... | 18,875,953.75 | 12,336,611.14 | 6,539,342.61 | 34.7% |
| | $85,820,356.25 | $63,475,877.26 | $22,344,478.99 | 26.0% |

The 1931 real estate taxes are payable in two installments, the second of which did not become delinquent until the property was up for sale. The

sales started December 4, 1933. The taxes collected since the time of the last report to the Court amount to $8,523,594.73, which is 10 per cent of the taxes levied and due. This money was used to redeem tax anticipation warrants, to pay current expenses and to pay defaulted interest on bonds.

The non-payment of these taxes has forced the Sanitary District, through lack of revenue, to default on all payments of maturing principal on bonds used for construction work due from January 1, 1932 to December 1, 1933, inclusive, and any payments of interest on these bonds from June 1, 1933 to December 1, 1933, inclusive. The amounts in default, as of December 20, 1933, are:

| | |
|---|---|
| Principal | $14,853,000.00 |
| Interest | 2,381,716.25 |
| Total | $17,234,716.25 |

The interest in default amounted to a maximum of $6,370,268.75 on May 1, 1933 but this has been reduced to $2,381,716.25 since that time. The first payment of interest coupons since default occurred was made May 22, 1933. Since that time $6,368,268.75 has been paid, up to December 11, 1933. A further default in payment of principal and interest on bonds due January 1, 1934, in the amount of $982,475.00 may be expected.

The General Assembly of the State of Illinois, at its 1933 session, passed a bill authorizing The Sanitary District of Chicago to issue bonds without a referendum in sufficient amount (limited to $100,000,000, and, of course, to the limitation of 5 per cent of the assessed valuation) to do the work made necessary by the decree of the Supreme Court of April 21,

1930. The Sanitary District still had $7,614,000 of bonds unsold from the issue of $27,000,000 of bonds authorized by the Illinois General Assembly in 1929 in addition to the bulk of $36,000,000 of bonds approved by the voters in February, 1931.

In view of the fact that the local tax situation is not likely to improve sufficiently in the near future to enable the payment of bonds in default from the receipt of taxes and thus make the Sanitary District bonds marketable, the Sanitary District has been using every effort possible to obtain a loan from the Federal Emergency Administration of Public Works (created by an Act of the Congress, in June, 1933), in order that the sewage treatment construction program might be completed. After extended negotiations the Federal Emergency Administration of Public Works has agreed to purchase bonds of the Sanitary District in an amount sufficient to carry on the construction work for approximately the next two years. The steps taken by the Sanitary District to obtain money from the United States in order to complete the works made necessary by the decree of this Court were as follows:

The Board of Trustees of The Sanitary District of Chicago, on June 15, 1933, approved the future sewage treatment construction program, estimated to cost $120,367,500. An application (hereinafter designated "Preliminary Application") for a loan from the Federal Emergency Administration of Public Works, in the amount of $120,367,500, was then prepared, using the same general form that had been used in the application to the Reconstruction Finance Corporation, in 1932, referred to in the re-

port of January 1, 1933. Copies of this "Preliminary Application" were mailed on June 29, 1933 to the Secretary of the Interior Harold L. Ickes; General Hugh S. Johnson; Colonel Donald H. Sawyer, Temporary Public Works Administrator; Colonel Waite, Assistant Public Works Administrator, and John F. Coleman, of the Reconstruction Finance Corporation.

On July 5, 1933, the Sanitary District received a formal application blank, Form No. 1, from the Federal Emergency Administration of Public Works. The "Preliminary Application" was then revised to comply with Form No. 1 and the "Formal Application" was ready for filing by July 20, 1933. One copy of the "Preliminary Application" was returned by Colonel Sawyer on July 8, 1933, with instructions to make formal application on Form No. 1 furnished by the Public Works Administration and file the same with the Illinois State Advisory Board of the Federal Emergency Administration of Public Works, and on July 15, 1933, another copy of the "Preliminary Application" was returned by Colonel Waite with the same instructions as given by Colonel Sawyer. The Illinois State Advisory Board was appointed on July 26, 1933, and the "Formal Application" was filed with this Board on August 5, 1933. At a public hearing held on August 11, 1933, the Illinois State Advisory Board and the Regional Director requested that supplemental information be prepared and filed in accordance with Circular No. 2 (dated and issued August 1, 1933) of the Federal Emergency Administration of Public Works, which became available to the Sanitary District on the date of the hearing.

The Illinois State Engineer of the Public Works Administration was appointed on August 18, 1933. On August 19, 1933, the supplemental information contained in Circular No. 2 was furnished to the Illinois State Advisory Board, together with additional information requested at the public hearing on August 11, 1933.

Then the "Formal Application" was changed to comply with the requirements of Circular No. 2 and was filed with the Federal Emergency Administration of Public Works at Washington on August 31, 1933. At that time, conferences were held with Secretary Ickes, Federal Emergency Administrator of Public Works, Mr. Landau of the legal staff, Colonel Clark and Mr. McDonough of the engineering staff, and Mr. Mansfield of the financial staff.

About a week later, the Sanitary District learned that the matter had been referred back to the Illinois State Advisory Board. On September 8, 11 and 19, conferences were held with the Illinois State Engineer of the Public Works Administration, relative to the purchase of bonds. On September 19, 1933, the Sanitary District was informed that favorable consideration would be given to an application for a purchase of bonds to complete the five principal contracts on the work already under contract by the Sanitary District, namely the Pumping Station and Blower House and the Aeration and Final Settling Tanks at the Calumet Works, Battery "C" of the Imhoff Tanks at the West Side Works and Sections 3 and 4 of the West Side Sewer, all of which work had been discontinued because of lack of funds. Meanwhile, from September 12 to September 14, one of

the financial experts from the Washington office of the Federal Emergency Administration of Public Works had been in Chicago investigating the financial condition of the Sanitary District. On September 20, 1933, a conference was held with the Illinois State Engineer of the Public Works Administration concerning the details for the sub-application for the purchase of bonds to complete the five existing contracts and on September 22, 1933 a sub-application (No. 1) for the purchase of bonds, in the sum of $7,874,477, was filed.

On October 11, approval of the purchase of bonds requested in Sub-Application No. 1 was announced in Washington by Secretary Ickes. At a conference held on October 16, 1933, the Illinois State Engineer of the Public Works Administration informed the Sanitary District representatives that an agreement covering the subject matter would be prepared in Washington and submitted to the Sanitary District. Copies of the agreement for the purchase of bonds, in the amount of $8,000,000, were furnished to the Sanitary District on November 3, 1933. Conferences were held in Chicago on November 6 and 7, 1933 between representatives of the Public Works Administration and the Sanitary District, regarding the details of this agreement and it was accepted by the Board of Trustees of the Sanitary District on November 13, 1933, and finally approved by the Federal Emergency Administrator of Public Works on November 15, 1933.

In the Sub-Application No. 1, the Sanitary District stated that it proposed to press the "Formal Application" (filed August 31, 1933) for the purchase of

bonds, in the amount of $120,367,500, sufficient to complete the entire sewage treatment construction program. At a conference held on November 7, 1933, the Sanitary District representatives were informed that no purchase of bonds would be considered for work which could not be completed within the next two years and that no serious consideration had been given or would be given for the purchase of bonds to complete the entire project. Further, the Sanitary District was informed that favorable consideration would be given to an application for the purchase of bonds in the amount of $4,690,000, sufficient to construct four additional sections of the West Side Intercepting Sewer, for which plans had already been completed.

Another Sub-Application (No. 2) for the purchase of bonds in the amount of $4,690,000 for the construction of West Side Sewer, Sections 5, 6, 7 and 8, was then prepared and filed with the Illinois State Engineer of the Public Works Administration on November 14, 1933. The Chairman of the Finance Committee of The Sanitary District of Chicago conferred with Secretary Ickes, Federal Emergency Administrator of Public Works, in Washington, on November 15 and 16, 1933, relative to this Application (No. 2) and relative to the purchase of bonds for such additional work as could be completed within the next two years. Then, on November 21, 1933, the Sanitary District was instructed by the Illinois State Engineer of the Public Works Administration to file an application for this additional work.

Another Sub-Application (No. 3) for the purchase of bonds in the amount of $29,257,770 was prepared

and filed with the Illinois State Engineer of the Public Works Administration on November 25, 1933. A public hearing on this application (while in preparation) was held on November 23, 1933 by the Illinois State Advisory Board.

On December 6, 1933, Secretary Ickes, Federal Emergency Administrator of Public Works, announced, in Washington, that the purchase of bonds from the Sanitary District, in the amount of $33,948,000, had been approved. This purchase covers the amounts requested in Sub-Applications Nos. 2 and 3. The Sanitary District, on December 8, 1933, received the form of agreement for the purchase of $33,948,000 of bonds. Conferences were held in Chicago on December 11 and 12, 1933, between representatives of the Federal Emergency Administration of Public Works and the Sanitary District, regarding the details of this agreement. On December 13, 1933, the Board of Trustees of The Sanitary District of Chicago passed an ordinance authorizing the execution of the agreement for the purchase of bonds in the amount of $33,948,000 by the Public Works Administration, as well as an ordinance providing for the rescinding and cancelling of the agreement of November 15, 1933 and the execution of a substitute agreement for the purchase of $8,000,000 of bonds in lieu thereof. Both agreements were formally executed and in force on December 16, 1933.

The bonds were delivered by the Sanitary District and the cash was deposited by the Federal Emergency Administration of Public Works to the credit of the Sanitary District on December 20, 1933 in the amount of $42,169,315.76. Of this amount $41,938,000.00 was

for the purchase of bonds, and $231,315.76 for accrued interest on these bonds from the date of their issue to the date of their delivery to the Federal Emergency Administration of Public Works.

Construction work will be resumed immediately and prosecuted diligently, subject to the supervision of the Federal Emergency Administration of Public Works, on approximately half of the items for which finances are provided in the agreements of December 16, 1933. On the balance of these items, namely, those items of the West-Southwest Sewage Treatment Plant for which finances are provided, design work will be continued and construction will be started as soon as the Engineering Survey provided in the agreement of December 16, 1933, is completed. This should not be later than May 16, 1934. These items are those which can be completed within a period of two to two and one-half years.

The total work accomplished by The Sanitary District of Chicago in the construction of sewage treatment works during the period from June 1, 1933 (the date of the summaries for the last report) to December 1, 1933 (the date of the summaries for this report), as measured by construction expenditures, was as follows:

TABLE 3.

| | |
|---|---|
| Calumet Project | $ 89,797.16 |
| North Side Project | 2,624.30 |
| West Side Project | 59,479.27 |
| Southwest Side Project | 30,74[illegible] |
| Total | $182,644.65 |

By adding the various items indicated in Table 3 to corresponding items in Table 1, the completed por-

tion of the sewage treatment construction program on December 1, 1933, is as follows:

TABLE 4.

COMPLETED WORK AS OF DECEMBER 1, 1933.

| | |
|---|---|
| Calumet Project | $ 21,120,149.38 |
| North Side Project | 37,104,990.93 |
| West Side Project | 41,771,215.03 |
| Southwest Side Project | 323,252.38 |
| Miscellaneous Plants and Sewers | 596,188.86 |
| Chicago River Controlling Works | 53,415.74 |
| Total | $100,969,212.32 |

By subtracting, in round figures, the various items indicated in Table 3 from corresponding items in Table 2 and transferring certain items from the Southwest Side Project to the West-Southwest Plant, the estimated cost of future sewage treatment construction, as of December 1, 1933, is as follows:

TABLE 5.

FUTURE WORK AFTER DECEMBER 1, 1933.

| | |
|---|---|
| Calumet Project | $ 14,050,000.00 |
| North Side Project | 5,390,000.00 |
| West Side Project | 13,078,000.00 |
| West-Southwest Plant | 42,697,000.00 |
| Southwest Side Project | 39,770,000.00 |
| Miscellaneous Plants and Sewers | 2,000,000.00 |
| Chicago River Controlling Works (if necessary) | 3,200,000.00 |
| Total | $120,185,000.00 |

Arrangements have been concluded with the Federal Emergency Administration of Public Works for financing construction work on these projects as follows:

| | |
|---|---|
| Calumet Project | $ 9,408,000.00 |
| West Side Project | 10,884,000.00 |
| West-Southwest Plant | 21,646,000.00 |
| Total | $41,938,000.00 |

The remainder of the work in the sewage treatment construction program (for which no finances are at present available) is as follows:

| | |
|---|---|
| Calumet Project | $ 4,642,000.00 |
| North Side Project | 5,390,000.00 |
| West Side Project | 2,194,000.00 |
| Southwest Side Project | 39,770,000.00 |
| West-Southwest Plant | 21,051,000.00 |
| Miscellaneous Plants and Sewers | 2,000,000.00 |
| Chicago River Controlling Works (if necessary) | 3,200,000.00 |
| Total | $78,247,000.00 |

## SEWAGE TREATMENT.

The population of The Sanitary District of Chicago, as of December 1, 1933, is about 4,221,000, according to estimates made from the figures of the 1930 census. The industrial wastes in the Sanitary District are assumed to be equivalent to the sewage of 1,745,000 additional persons. Hence, the total population and industrial wastes equivalent amount to 5,966,000. This figure includes the Corn Products wastes, equivalent to the sewage of 393,000 persons, which wastes have been greatly reduced as a result of certain experimental work initiated by the Sanitary District.

The 1933 total population, and industrial waste equivalent, as above indicated, are estimated as 5,966,000. Up to date, the Sanitary District has assumed that sewage treatment could produce an annual average of 85 per cent purification. Hence, so called complete treatment for the total December 1, 1933, population and industrial wastes equivalent would equal the 100 per cent treatment of the sewage of 5,071,000, which is 85 per cent of 5,966,000.

The expenditures for sewage treatment have been indicated in Tables 1, 3 and 4. The amounts of actual sewage treatment in operation on June 25, 1933 (as of the time of the last report to the Supreme Court) and at the present time are shown in Tables 6 and 7, following:

TABLE 6.

ACTUAL SEWAGE TREATMENT IN OPERATION AS OF JUNE 25, 1933.

| Treatment Works | Population Equivalent | Percentage Treatment | Treatment 100 Per Cent Basis |
|---|---|---|---|
| Calumet: | | | |
| (Complete treatment) .... | 15,000 | 85 | 13,000 |
| (Sedimentation) ..... | 210,000 | 33⅓ | 70,000 |
| North Side ..... | 1,100,000 | 85 | 935,000 |
| West Side (Sedimentation).. | 750,000 | 33⅓ | 250,000 |
| Miscellaneous (Morton Grove, Glenview, Northbrook) ... | 6,000 | 85 | 5,000 |
| Corn Products (Reduction).. | 378,000 | | 322,000 |
| Total..... | 2,459,000 | | 1,595,000 |

TABLE 7.

ACTUAL SEWAGE TREATMENT IN OPERATION AS OF DECEMBER 24, 1933.

| Treatment Works | Population Equivalent | Percentage Treatment | Treatment 100 Per Cent Basis |
|---|---|---|---|
| Calumet: | | | |
| (Complete treatment) .... | 15,000 | 85 | 13,000 |
| (Sedimentation) ..... | 215,000 | 33⅓ | 72,000 |
| North Side ..... | 1,117,000 | 85 | 949,000 |
| West Side (Sedimentation).. | 757,000 | 33⅓ | 252,000 |
| Miscellaneous (Morton Grove, Glenview, Northbrook) ... | 6,000 | 85 | 5,000 |
| Corn Products (Reduction).. | 393,000 | | 331,000 |
| Total..... | 2,503,000 | | 1,622,000 |

The extent of the operation of sewage treatment plants at the present time is equal to the 100 per cent treatment of the sewage of 1,622,000 out of 5,071,000 persons, which would be the present possible 100 per cent treatment if the sewage of the total population and industrial wastes equivalent of 5,966,000 was being treated. This indicates the treatment of 32.0 per cent of the total sewage within the Sanitary District.

## DIVERSION OF WATER.

As was stated in the last report to the Supreme Court the net diversion of water from Lake Michigan during the calendar year 1932, averaged 6450 cubic feet per second. The domestic pumpage of the Chicago metropolitan area during this period averaged 1650 cubic feet per second; and the total flow from the Main Channel at Lockport averaged 8100 cubic feet per second.

Diversion of water from Lake Michigan by the Sanitary District of Chicago since July 1, 1930, has been made in accordance with a Permit from the Secretary of War, dated June 26, 1930, which authorized the diversion of water as specified in the Decree of the Supreme Court, handed down April 21, 1930. This limits the net diversion to an annual average of not more than 6500 cubic feet per second up to December 31, 1935. The average monthly diver-

sion as made under this Permit from January 1 to December 20, 1933, is indicated in the table following:

| Month 1933 | Total Flow From Main Channel At Lockport C.F.S. | Inflow From Willow Springs Spillway C.F.S. | Domestic Pumpage Chicago Metropolitan Area C.F.S. | Net Diversion From Lake Michigan C.F.S. |
|---|---|---|---|---|
| January | 7120 | 0 | 1570 | 5550 |
| February | 6820 | 0 | 1610 | 5210 |
| March | 7760 | 0 | 1585 | 6075 |
| April | 8200 | 5 | 1575 | 6620 |
| May | 7350 | 525 | 1600 | 5625* |
| June | 8545 | 0 | 1865 | 6680 |
| July | 8925 | 0 | 1875 | 7050 |
| August | 8750 | 0 | 1835 | 6915 |
| September | 8525 | 0 | 1800 | 6725 |
| October | 7690 | 0 | 1695 | 5995 |
| November | 8095 | 0 | 1645 | 6450 |
| December 1 to 20. | 8090 | 0 | 1600 | 6490 |
| Average | 8015 | 45 | 1690 | 6280 |

*Flow reduced account of high water in Illinois River.

All of which is respectfully submitted,

THE SANITARY DISTRICT OF CHICAGO,

By THOMAS J. BOWLER,
*Its President.*

PHILIP HARRINGTON,
*Its Chief Engineer.*

WILLIAM ROTHMANN,
*Its Attorney.*

Attest:

JAMES J. SULLIVAN,
*Clerk.*